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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,228

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Yves Hatzfeld

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EXAMINER

ZHENG, LI

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,228	Applicant(s) HATZFELD ET AL.	
	Examiner LI ZHENG	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12 and 21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1-9, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's cancellation of claims 10-11 and 13-20, amendments to claims 1, 3, 8 and 12, as well as submission of new claims 21 filed on 12/21/2007 are acknowledged and entered.
2. Claims 1-9, 12 and 21, including SEQ ID NO:2 are pending and examined on the merits.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The objections to the specification are withdrawn in light of specification amendments.
5. The rejection of claims 1-9 and 12 under 35 U.S.C. 112, second paragraph, is withdrawn due to claim amendment.
6. The rejections under U.S.C 102 are withdrawn due to claim amendment.

Claim Rejections - 35 USC § 112

New Matter

7. Claims 1-9, 12 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite “ATPase domain having at least 70% sequence identity to SEQ ID NO: 2”. Applicants fail to point to support for the phrase in the instant specification. Upon a cursory search of the specification, support could not be found. Applicants are required to point to support for “ATPase domain having at least 70% sequence identity to SEQ ID NO: 2” or to amend the claims to delete the NEW MATTER.

Written Description

8. Claims 1-9 and 12 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record stated in the Office action mailed September 21, 2007. Applicants traverse in the paper filed December 21, 2007. Applicants’ arguments have been fully considered but were not found persuasive.

Applicants argue that the specification discloses that the TAD protein comprises an ATPase domain and that the homologues have in an increasing order of preference at least 70%-99% identity. Applicant further argue that a number of homologues to SEQ ID NO: 2 are described on page 3, lines 20-23 (response, page 12, 3rd paragraph).

The Office contends that Applicants may merely have language support for the claimed method. However, the specification does not correlate a conserved structure among claimed TAD homologues to the function of increasing seed yield. The only structure that correlates to the function is SEQ ID NO: 2, itself. Further, the specification does not describe any other regulatory gene that can be used for modulating the activity of TAD protein.

Scope of Enablement

9. Claims 1-9 and 12 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for increasing seed yield of a plant by introducing an expression cassette comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO: 2, does not reasonably provide enablement for a method for increasing any kind of yield of a plant by any other means to modulate the expression level of a nucleotide sequence encoding a TAD protein or a homologue, derivative or active fragment thereof or modulating activity thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims, for the reasons of record stated in the Office action mailed August 24, 2007. Applicants traverse in the paper filed December 26, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants present same arguments as discussed above (response, the paragraph bridging pages 12-13). Therefore, for the same reasons as discussed above, the rejection is maintained.

Further, Applicants fail to respond to the arguments that transforming plants with heterologous genes that are involved in plant development produce unpredictable results and that the specification does not teach other ways to up-regulate the expression of TAD protein as addressed in previous office action. Therefore, the Office maintains that undue experimentation would be required for a person skilled in the art to practice the invention in full scope.

Summary

Claim 21 is allowed.

Claims 1-9 and 12 are rejected. However, the invention is deemed free of prior art for that the prior art fails to teach or suggest a method for increasing seed yield of a plant by modulating expression of a TAD protein that is at least 70% identical to SEQ ID NO: 2.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031. The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Stuart F. Baum/

Primary Examiner, Art Unit 1638